

## WELL-COMPLETIONS

PINC NO.	PINC	Authority	Enforcement Action
<b>WELL-COMPLETION OPERATIONS</b>			
C-100	Have all wells in the same wellbay which are capable of producing hydrocarbons been shut-in below the surface with a pump-through-type tubing plug or SSSV and at the surface with a closed master valve prior to moving well-completion rigs and related equipment (or as otherwise approved by the District Supervisor)?	72	W/C
C-101	Is the well, from which the rig or related equipment is to be moved, equipped with a shut-in back pressure valve prior to removing the BOP system and installing the tree?	72	W/C
C-102	Have crew members been instructed in the safety requirements of the operations to be performed, possible hazards to be encountered, and general safety considerations to protect personnel, equipment, and the environment prior to engaging in well-completion operations?	76	W
C-103	Have the date and time of safety meetings been recorded at the facility and is the information available for review by MMS representatives?	76	W
C-104	Have all units being used for well-completion operations which have both a traveling block and a crown block been equipped with a safety device which is to be designed to prevent the traveling block from striking the crown block?	81	C
C-105	Has the device been checked for proper operation weekly and after each drill-line slipping operation?	81	W
C-106	Have the results of the operational check specified in C-105 been entered in the operations log?	81	W
C-107	Has the lessee received written approval from the District Supervisor prior to conducting well-completion operations?	83(a) 75	C

C-108	Is the well being continuously monitored during well-completion operations and not left unattended at any time unless the well is shut-in and secured?	84(a)	W
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**Has the following well-control fluid equipment been installed, maintained, and utilized:**

C-109	A fill-up line above the uppermost BOP?	84(b)(1)	C
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C-110	A recording mud-pit-level indicator with both a visual and an audible warning device?	84(b)(3)	C
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C-111	Is the annulus being filled with well-control fluid before the change in such fluid level decreases the hydrostatic pressure 75 psi or every five stands of drill pipe, whichever gives a lower decrease in hydrostatic pressure, when coming out of the hole with drill pipe?	84(c)	W
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C-112	Has the number of stands of drill pipe and drill collars that may be pulled prior to filling the hole and the equivalent well-control fluid volume been calculated and posted near the operator's station?	84(c)	W
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C-113	Is a mechanical, volumetric, or electronic device utilized to determine the amount of well-control fluid required to fill the hole?	84(c) 84(b)(2)	C
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**Does the BOP system for well-completion operations include the following:**

C-114	Three preventers when the expected surface pressure is less than 5,000 psi?	85(b)(1)	C
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C-115	Four preventers when the expected surface pressure is 5,000 psi or greater?	85(b)(2)	C
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C-116	Dual pipe rams installed on one of the pipe-ram preventers when dual tubing strings are being handled simultaneously?	85(b)(2)	C
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**When tapered drill string is used, does the BOP system include, as a minimum:**

C-117	Four preventers when the expected surface pressure is less than 5,000 psi?	85(b)(3)(i)	C
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C-118	Five preventers when the expected surface pressure is 5,000 psi or greater?	85(b)(3)(ii)	C
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**Does the BOP system for well-completion operations contain the following equipment:**

C-119	A hydraulic-actuating system that provides sufficient accumulator capacity to supply 1.5 times the volume necessary to close all BOP equipment units with a minimum pressure of 200 psi above the precharge pressure?	85(c)(1)	C
C-120	A secondary power source, independent from the primary power source, with sufficient capacity to close all BOP system components and hold them closed?	85(c)(2)	C
C-121	Locking devices for the pipe-ram preventers?	85(c)(3)	C
C-122	At least one remote BOP control station and one BOP control station on the rig floor?	85(c)(4)	C
C-123	A choke line and a kill line each equipped with two full opening valves and a choke manifold?	85(c)(5)	C
C-124	At least one remotely controlled valve each on the choke line and on the kill line?	85(c)(5)	C
C-125	Is the pressure rating of the choke and kill line and associated equipment at least equivalent to the pressure rating of the ram preventers?	85(c)(5)	C
C-126	Are an inside BOP or spring-loaded, back-pressure safety valve and an essentially full-opening, work-string safety valve in the open position being maintained on the rig floor at all times during well-completion operations?	85(d)	C
C-127	Is a wrench to fit the work-string safety valve readily available?	85(d)	C
C-128	Are connections readily available for inserting valves in the work string?	85(d)	C
C-129	Have all BOP system components been successfully tested to a low pressure of 200 to 300 psi prior to conducting high-pressure tests?	86(a)	W/C
C-130	Have ram-type BOP's, related control equipment including the choke and kill manifolds, and safety valves been successfully tested to the rated working pressure of the BOP equipment (or as otherwise approved by the District Supervisor)?	86(a)	W/C

C-131	Have variable bore rams been pressure tested against all sizes of pipe in the well excluding drill collars?	86(a)	W/C
C-132	Have surface BOP systems been pressure tested with water?	86(a)	W/C
C-133	Has the annular-type BOP been successfully tested at 70 percent of its rated working pressure (or as otherwise approved by the District Supervisor)?	86(a)	W/C
C-134	Has each valve in the choke and kill manifolds been successfully, sequentially pressure tested to the ram-type BOP test pressure?	86(a)	W/C

**Have the BOP systems been tested at the following times:**

C-135	When installed?	86(b)(1)	W/C
C-136	At least once every 7 days?	86(b)(2)	W/C
C-137	At least once every 30 days during operation for the blind or blind-shear rams?	86(b)(2)	W/C
C-138	Following repairs that require disconnecting a pressure seal in the assembly, only the affected seal need be pressure tested?	86(b)(3)	W/C
C-139	Do the tests alternate between control stations and at staggered intervals to allow each crew to operate the equipment?	86(b)(2)	W/C
C-140	Are all personnel engaged in well-completion operations participating in a weekly BOP drill to familiarize crew members with appropriate safety measures?	86(c)	W
C-141	Are the time, date, and results of all pressure tests, actuations, inspections, and crew drills of the BOP system, system components, and marine risers recorded in the operations log or referenced document?	86(e) 86(h)(4)	W
C-142	Has the casing been pressure tested, calipered, or otherwise evaluated every 30 days during prolonged operations?	87(b)	W
C-143	Are BOP test pressures recorded on a pressure chart, unless otherwise approved by the District Supervisor?	86(d)	W

C-144	Is the test interval for each BOP component tested sufficient to demonstrate that the component is effectively holding pressure?	86(d)	W
C-145	Are BOP test pressure charts certified as correct by the operator's representative at the facility?	86(d)	W
C-146	Does the documentation indicate the sequential order of BOP and auxiliary equipment testing and the pressure and duration of each test?	86(e)(1) 86(e)(4)	W
C-147	Is the control station used during the test identified in the operations log or referenced document?	86(e)(2) 86(e)(4)	W
C-148	For subsea systems, is the pod used during the test identified in the operations log or referenced document?	86(e)(2) 86(e)(4)	W W
C-149	Are any problems or irregularities observed during BOP and auxiliary equipment testing and any actions taken to remedy such problems or irregularities recorded in the operations log or referenced document?	86(e)(3) 86(e)(4)	W W
C-150	Are all records including pressure charts, operations log, and referenced documents of BOP tests, actuations, and inspections available at the facility for the duration of the well-completion activity?	86(e)(4)	W
C-151	Are all such records retained for a period of two years at the facility, at the lessee's field office nearest the facility, or at another location conveniently available to the District Supervisor?	86(e)(4)	W
C-152	Are accumulator regulators supplied by rig air, and without a secondary source of pneumatic supply, equipped with manual overrides, or alternately, are other devices provided to ensure capability of hydraulic operations if rig air is lost?	86(c)(1)	C